

**REDACTED**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

JUN 29 2009

Mr. Mark Smith  
Georgia Environmental Protection Division  
Department of Natural Resources  
205 Butler Street  
Suite 1154 – East Tower  
Atlanta, GA 30334

Dear Mr. Smith:

We are pleased to provide a copy of the Action Memorandum for the Virginia Carolina Chemical Company – Atlanta Site located in Atlanta, DeKalb County, Georgia. If you have any questions or comments concerning this document, please contact the On-Scene Coordinator at the following address:

Gary Andrew  
U.S. Environmental Protection Agency  
ERRB  
61 Forsyth Street  
Atlanta, Georgia 30303

Sincerely,

A handwritten signature in black ink, appearing to read "A. Shane Hitchcock".

A. Shane Hitchcock, Chief  
Emergency Response & Removal Branch

Enclosure

cc: Debbie Jourdan  
Dawn Taylor  
Jim McGuire  
Gary Andrew  
Kerri Sanders



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JUN 24 2009

**ENFORCEMENT ACTION MEMORANDUM**

**SUBJECT:** Request for a Removal Action at the Virginia Carolina Chemical Corporation Site, Atlanta, DeKalb County, Georgia

**FROM:** Gary A. Andrew, On-Scene Coordinator  
Emergency Response & Removal Branch

**THRU:** Shane Hitchcock, Chief  
Emergency Response & Removal Branch

**TO:** Franklin E. Hill, Director  
Superfund Division

**I. PURPOSE**

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval of the proposed enforcement-lead removal action described herein for the Virginia - Carolina Chemical (VCC) Atlanta Site, located in Atlanta, DeKalb County, Georgia (the Site). The Site poses a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.415(b)(2) criteria for removal actions. ExxonMobil Corporation (XOM) is the corporate successor to VCC. This removal action is anticipated to be enforcement-lead pursuant to an Administrative Order on Consent (AOC) with XOM.

**II. SITE CONDITIONS AND BACKGROUND**

**A. Site Description**

CERCLIS ID: GAN000409844  
Site ID #: A4LJ  
Type: Time-Critical Removal Action

The Former VCC plant in Atlanta, Georgia was established by Virginia - Carolina Chemical Company near the turn of the 20<sup>th</sup> Century through the acquisition of three facilities: the former Virginia-Carolina Chemical Company Fertilizer Works facility; the former Clifton Chemical and

Phosphate Company plant facility; and the former Kennesaw Guano Company plant facility. Prior to acquisition by Virginia - Carolina Chemical Company, all three of these facilities produced sulfuric acid using the lead acid chamber process. However, following acquisition by Virginia-Carolina Chemical Company, it appears that fertilizer manufacturing and acid production operations were eventually consolidated into the former VCC Fertilizer Works located on the northwestern portion of the Site. The Clifton Chemical and Phosphate Company facility was out of operation by 1892 and in ruins by 1899 before being acquired by VCC. The Kennesaw Guano Company operated a complete fertilizer plant until 1899, but by 1911 the lead acid chamber structure was removed and Virginia-Carolina Chemical Company was using the former mill and dumping pit for fertilizer storage.

Virginia - Carolina Chemical Company entered into bankruptcy in 1924. At the conclusion of federal reorganization procedures in 1926, VCC of Richmond, Virginia emerged as a new company and acquired the former Virginia -Carolina Chemical Company phosphate fertilizer operations in Atlanta, DeKalb County, Georgia. VCC began selling its DeKalb County properties starting in 1938, and in 1961 VCC sold its remaining property to the City of Atlanta, which included the site of the VCC Fertilizer Works. In 1963, VCC merged into Socony Mobil Oil; the company name changed in 1966 to Mobil Oil Company and in 1998, Exxon Corporation merged with Mobil Oil Company to form ExxonMobil Corporation, the successor to VCC.

The footprint of the former VCC property is currently occupied by a mix of residential, commercial, vacant, undeveloped, recreational and other types of properties. Residential properties include the LaFrance Street Loft Condominiums, Arizona Lofts, Edgewood Court Apartments, and residential properties along Edgewood Avenue. Commercial properties include the Atlanta Public Schools Service Center, Atlanta Board of Education Broadcasting Station, Consolidated Fuzz Property, and the Edwards Baking Company Property. Recreational properties include the Atlanta Youth Soccer Association Property and Gilliam Park. Contaminants have only been identified on the commercial properties.

## **1. Removal Site Evaluation**

Between September and November 2006, ExxonMobil's contractor, ARCADIS BBL, conducted a Preliminary Assessment/Site Inspection (PA/SI). Further Site delineation was conducted in June 2008. The results were submitted to the Environmental Protection Agency (EPA) for review in a Site Delineation Report/Removal Action Work Plan (SDR/RAWP) in February 2009 (Ref. 1).

Arsenic and lead were detected in many of the soil samples collected from the Site at concentrations above the screening levels of 27 mg/kg and 400 mg/kg, respectively, used for the PA/SI. Arsenic and/or lead were detected above the screening levels in two distinct areas at the Site. The

largest contiguous area containing elevated concentrations of arsenic and/or lead is located in the north-central portion of the Site near the approximate location of the former fertilizer structures. The second area, located in the northeast corner of the Site, contains only one soil boring that yielded arsenic and lead concentrations above the screening levels. The maximum detected concentrations of arsenic and lead were 1,260 mg/kg and 2,660 mg/kg, respectively. This sample came from the vicinity of the radio tower on the Board of Education Property. Soil pH levels varied from 4.3 to 7.8 standard units. The location of soil samples containing arsenic and/or lead at concentrations above the screening levels are depicted on Figure 3-1 in the SDR / RAWP (Ref. 1).

Groundwater samples were collected in 2006 from three groundwater monitoring wells. Sampling was conducted again in June 2008 with three additional wells included. The initial round of sampling in 2006 detected arsenic and lead above MCLs in MW-2. In 2008 arsenic and lead were not detected above MCLs in any of the wells. Surface water samples were collected at four locations on the Site. Two came from a branch of Sugar Creek and two from an unnamed tributary that traverses the Site. Arsenic and lead were detected in the branch, but results were below the screening level for both analytes.

Sediment samples were collected from the same four locations in the waterways. The maximum arsenic and lead concentrations were 10.4 mg/kg and 83.4 mg/kg respectively. These results were below the soil screening levels of 27 mg/kg for arsenic and 400 mg/kg for lead.

In March 2009, the Site Delineation Report and Removal Action Work Plan reports were forwarded to the EPA Region 4 Emergency Response and Removal Branch (ERRB) for consideration under CERCLA removal authorities. On April 14, 2009, ERRB completed a review of the Site information and concluded that the Site meets the criteria as set forth in 40 CFR 300.415 (b) (2) for a time-critical removal (Ref. 2).

## **2. Physical Location**

The former VCC Atlanta fertilizer plant is located in Atlanta, DeKalb County, Georgia (Figure 1-1). The Site is currently bounded by the MARTA/CSX railroads and LaFrance Street (a.k.a. College Ave., N.E.) to the north; Wade Avenue and Hardee Street to the south; Wesley Avenue and a small branch of Sugar Creek to the west; and the western boundary of the DeKalb County Land Lot 210B of District 15 (Formerly Clay Street) to the east (Figure 1-2). Figure 1-2 also shows the current tax parcel property boundaries in the vicinity of the Site. The geographic location of the center of the Site is at approximately 33.7586° North Latitude and 84.3325° West Longitude.

### **3. Site Characteristics**

The Site lies within the Piedmont physiographic province of Georgia. The area is characterized by gently rolling landscape that increases in intensity approaching the Ridge and Valley and Blue Ridge provinces to the north. Topographic relief in the vicinity of the Site is moderate, with ground surface elevations generally varying from 940 to 1,030 feet above mean sea level. A branch of Sugar Creek, which forms the western boundary of the former VCC property, is the most prominent surface water body in the vicinity of the Site. This branch discharges to the main portion of Sugar Creek approximately 1.2 miles south of the Site. Sugar Creek flows into the South River and is part of the Ocmulgee River drainage basin, which empties into the Atlantic Ocean near Darien, Georgia.

Plant operations were conducted on the northern portion of the former VCC property. The acid chambers from the three facilities were located across the breadth of the property from west to east. The Site lies within an area of mixed residential, commercial, vacant, undeveloped, recreational and other types of properties.

### **4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant**

The Site Delineation Report disclosed that there is significant lead and arsenic contamination that is closely associated with locations of the former lead acid chambers on the Site. EPA Region 4 Technical Services Section (TSS) recommends a removal action level of 400 ppm lead and 40 ppm arsenic for generic residential exposure scenarios. Concentrations exceeding these levels at VCC-Atlanta were confirmed through on-site XRF screening and laboratory analysis. The maximum lead concentration detected in surface soils was 2,660 ppm, and the maximum arsenic concentration in surface soils was 1,260 ppm.

Arsenic and lead are both hazardous substances, listed in Title 40 of the Code of Federal Regulations (CFR) Section 302.4, as referred to in Section 101 (14) of CERCLA, as amended. Hazardous substances from the Site will continue to be a threat to public health, welfare and the environment, if not mitigated.

### **5. NPL Status**

The Site is not on the National Priorities List (NPL).

## **6. Maps, Pictures, and Other Graphic Representations**

Figures 1-1 through 5-1 in the ARCADIS SDR/RAWP (Ref. 1) provide a depiction of the Site location, sampling locations, and proposed removal actions.

### **B. Other Actions To Date**

#### **1. Previous Actions**

Other than the activities mentioned above, no other government or private actions have been taken to investigate or mitigate the threats posed by the Site.

#### **2. Current Actions**

EPA and XOM are currently negotiating an Administrative Order on Consent which will provide for continued investigation and characterization and removal actions at the Site.

### **C. State and Local Authorities' Roles**

#### **1. State and Local Actions to Date**

The Georgia Environmental Protection Division (GAEPD) concluded that conditions at the Site warranted further evaluation and referred the Site to EPA Region 4.

#### **2. Potential for Continued State and Local Response**

It is not anticipated that GAEPD will perform any response activities at the Site. ERRB will continue to coordinate with ATSDR, State, and local agencies during the removal activities.

## **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

### **A. Threats to Public Health or Welfare**

Arsenic and lead are both hazardous substances, listed in the Title 40 of the CFR Section 302.4, as referred to in Section 101 (14) of CERCLA, as amended. Arsenic and lead contaminated soils at the Site pose a significant threat to public health. The threat comes primarily from potential human exposure to these hazardous substances. Direct contact and ingestion of these hazardous substances are the primary pathways of exposure. Continued release of these hazardous substances may cause potential chronic health effects to persons living nearby.

Arsenic and lead present in on-site surface and subsurface soils pose the following threats to public health or welfare as listed in Section 300.415 (b)(2) of the NCP.

*Section 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, or the food chain from hazardous substances pollutants or contaminants."* The SDR/RAWP disclosed that there is significant lead and arsenic contamination that is closely associated with the locations of the former lead acid chambers on the Site. EPA Region 4 Technical Services Section (TSS) recommends a removal action level of 400 ppm lead and 40 ppm arsenic for generic residential exposure scenarios. Concentrations exceeding these levels at VCC-Atlanta were confirmed through on-site XRF screening and laboratory analysis. The maximum lead concentration detected in surface soils was 2,660 ppm, and the maximum arsenic concentration in surface soils was 1,260 ppm.

Residential and commercial properties are currently located within the footprint of the former VCC-Atlanta property. Potential human exposure to Site related contaminants may occur via inhalation of windborne dust, inadvertent ingestion of contaminated soil, and direct contact with contaminated surface soils. Most of the Site has unrestricted access. Only the Atlanta Board of Education Property has a sound and complete fence to deter access when the gates are closed and locked.

*Section 300.415 (b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate."* Analytical results reveal that high lead and arsenic levels are present at or near the land surface creating a potential for migration to off-site locations. Lead and arsenic concentrations exceeding the RALs of 400 ppm and 40 ppm, respectively, were confirmed through on-site XRF screening and laboratory analysis. The maximum lead concentration detected in surface soils was 2,660 ppm, and the maximum arsenic concentration in surface soils was 1,260 ppm.

The Site is adjacent to a branch of Sugar Creek, which forms the western boundary of the property. The area of the Site immediately up gradient from the creek is the largest contiguous area exhibiting arsenic and lead concentrations above RALs, creating the potential for Site contaminants to migrate to Sugar Creek through drainage pathways.

*Section 300.415 (b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released."* Several areas throughout the Site are void of vegetation making them susceptible to wind and surface water runoff during heavy rain events which are common in this geographical region. Such events may contribute to the migration of lead and arsenic into nearby water bodies, including Sugar Creek.

#### **IV. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTION AND ESTIMATED COSTS**

##### **A. Proposed Actions**

##### **1. Proposed Action Description**

The removal action will involve, but is not limited to, the following:

- a. XOM will develop and implement a Site Characterization Plan, to further investigate and determine the nature and extent of lead and arsenic contamination.
- b. XOM will implement the OSC approved removal action in accordance with the schedule and requirements of a Removal Action Work Plan. The Removal Action Work Plan shall include as a minimum: a health and safety plan, contaminated soil excavation plan, confirmatory soil sampling plan, quality assurance project plan, contaminated soil treatment and disposal plan, and a site restoration plan.
- c. XOM will excavate contaminated soils at the Site which exceed EPA's RAL/cleanup levels or as directed by the OSC. XOM will treat or dispose of the material according to appropriate industry and regulatory standards. Capping of contaminated soils in some areas may be considered.
- d. XOM will restore areas which are disturbed by the removal action to their pre-removal state to the maximum extent practicable.

##### **2. Contribution to Remedial Performance**

The proposed removal action will address the threats discussed in Section III, which meet the NCP Section 300.415 (b) (2) removal criteria. Although future action under the remedial program is unlikely, the removal action contemplated in this Action Memorandum would be consistent with any future remedial action.

##### **3. Description of Alternative Technologies**

Because the waste materials at the Site have not been fully characterized, no formal evaluation of alternative technologies has been made. Such an evaluation will take place before the disposal



phase of the response action and will be documented at that time.

Contaminated soil from the Site may be excavated and treated and/or disposed off-site. Alternatively, contaminated soils in some areas may be capped to eliminate the direct exposure pathway

**4. Engineering Evaluation/Cost Analysis (EE/CA)**

This proposed action is a time-critical removal and does not require an EE/CA.

**5. Applicable or Relevant and Appropriate Requirements (ARARs)**

On-site removal activities conducted under CERCLA need only comply with ARARs to the extent practicable given the exigencies of the situation. Off-site removal activities need only comply with all applicable Federal and State laws, unless there is an emergency. All waste transferred off-site will follow the CERCLA Off-Site Rule. A letter to GAEPD requesting ARARs was sent on May 1, 2009.

**6. Project Schedule**

The EPA is currently negotiating with XOM to undertake the removal actions outlined in this memorandum. The project schedule will be incorporated in the work plan submitted to EPA for approval under the AOC.

**VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

If this response action is significantly delayed or not taken, the persons living and working on the Site may be at risk to prolonged exposure to lead and arsenic.

**VII. OUTSTANDING POLICY ISSUES**

No outstanding policy issues have been identified at this time.

**VIII. ENFORCEMENT**

## IX. RECOMMENDATION

This decision document represents the proposed removal action for the Virginia Carolina Chemical – Atlanta Site, located in Atlanta, DeKalb County, Georgia. This document was developed in accordance with CERCLA, as amended, and not inconsistent with the NCP criteria. This decision is based upon the administrative record established for the Site. Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action, and I recommend your approval of this proposed enforcement removal action.

(Approval)

  
Franklin E. Hill, Director  
Superfund Division

Date:

6/24/09

(Disapproval)

\_\_\_\_\_

Date:

\_\_\_\_\_

Franklin E. Hill, Director  
Superfund Division

Attachments